

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the patent application of

APPLICANT: Jeffrey B. Hoke, et al. ATTY. DOCKET: 4569D(DIV)
SERIAL NO.: Not Yet Known FILING DATE: Not Yet Known
PRIOR APPLN: 09/689,217 PREV. EXAMINER: T. Vanoy
TITLE: METHOD AND DEVICE FOR
CLEANING THE ATMOSPHERE

November 15, 2001

Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir:

PRELIMINARY AMENDMENT

IN THE SPECIFICATION

In the CROSS REFERENCE TO RELATED APPLICATION, Delete lines 1 and 2 thereof and replace with the following: "This application is a divisional of pending application Serial No. 09/689/217 filed October 12, 2000, which is a divisional of application Serial No. 09/456,016 filed November 30, 1999 now U.S. patent No. 6,190,627."

IN THE CLAIMS

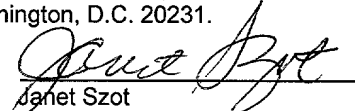
Add the following claims:

67. A method of treating the atmosphere to catalytically convert atmospheric pollutants to less harmful materials comprising contacting the pollutant containing atmosphere with an outer surface of a motor vehicle component which has been coated with a catalyst composition selected from the

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Date: November 15, 2001


Janet Szot

group comprising base metals, precious metals, salts and oxides thereof and combinations thereof the catalyst composition being protected with an overcoat of carbon which is sufficiently porous to enable said atmospheric containing said pollutants to pass therethrough into operative contact with the catalyst composition and sufficiently protective to prevent catalyst degrading contaminants from contacting the catalyst composition.

68. The method of claim 67 further comprising coating the carbon overcoated catalytic surface with at least one hydrophobic protective material which is capable of substantially preventing liquid water and/or water vapor from reaching the catalyst composition.

69. The method of claim 68 wherein the hydrophobic protective material is selected from the group comprising fluoropolymers and silicone polymers.

70. The method of claim 67 wherein said vehicle is selected from automobiles, trucks, buses, motorcycles and trains and said component is selected from radiators, air-conditioner condensers, charge air coolers, transmission coolers and inserted devices.

71. The method of claim 67 wherein said catalyst composition is selected from manganese dioxide, platinum, palladium and mixtures thereof.

72. The method of claim 67 wherein the catalyst composition is supported on a material selected from ceria, alumina, titania, silica, zirconia and mixtures thereof.

73. The method of claim 67 comprising catalytically treating the atmosphere at temperatures of from about 0° to about 150°C.

74. The method of claim 67 wherein the catalyst composition is selected from the group comprising base metals, precious metals as well as salts and oxides thereof and combinations thereof.

75. The method of claim 67 wherein the catalyst composition comprises manganese dioxide.

76. The method of claim 67 wherein the carbon is selected from the group comprising granular activated carbon, carbon black, permanganate on carbon and mixtures thereof.

77. The method of claim 67 wherein the pollutants to be treated are selected from the group comprising ozone, hydrocarbons, carbon monoxide and mixtures thereof.

78. A device for treating the atmosphere to catalytically convert atmospheric pollutants to less harmful materials comprising an outer surface of a motor vehicle component which has been coated with a catalyst composition the catalyst composition being protected with an overcoat of carbon which is sufficiently porous to enable said atmosphere containing said pollutants to pass therethrough into operative contact with the catalyst composition and sufficiently protective to prevent catalyst degrading pollutants from contacting the catalyst composition.

79. The device of claim 78 further comprising at least one hydrophobic protective material overcoating the carbon, said protective material being capable of substantially preventing liquid water and/or water vapor from reaching the catalyst composition or adsorptive composition.

80. The device of claim 78 comprising at least one layer of carbon and at least one layer of the hydrophobic protective material coated over the catalyst composition or adsorptive composition.

81. The device of claim 78 wherein the catalyst composition is selected from the group comprising base metals, precious metals as well as salts and oxides thereof and combinations thereof.

82. The device of claim 78 wherein the catalyst composition comprises manganese dioxide.

83. The device of claim 78 wherein the carbon overcoat material is selected from the group comprising activated granular carbon, carbon black, permanganate on carbon and mixtures thereof.

84. The device of claim 78 wherein the pollutants to be treated are selected from the group comprising ozone, hydrocarbons, carbon monoxide and mixtures thereof.

85. The device of claim 79 wherein the hydrophobic protective material is selected from the group comprising fluoropolymers and silicone polymers.

86. The device of claim 78 wherein said vehicle is selected from automobiles, trucks, buses, motorcycles and trains and said component is selected from radiators, air-conditioner condensers, charge air coolers, transmission coolers and inserted devices.


87. The device of claim 78 wherein said catalyst composition is selected from manganese dioxide, platinum, palladium and mixtures thereof.

88. The device of claim 78 wherein the catalyst composition is supported on a material selected from ceria, alumina, titania, silica, zirconia, and mixtures thereof.

REMARKS

Newly added claims 67-88 all relate to contacting the atmosphere with an outer surface of a motor vehicle component which has been coated with a catalyst composition. The use of such surfaces is described and contemplated in the specification at e.g., page 5, lines 18-22; page 6, lines 5-11; page 9, lines 21-29 and in the originally filed claims. No new matter has been added.

Respectfully submitted,


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